

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 01-103982

(43)Date of publication of application : 21.04.1989

---

(51)Int.Cl. C30B 23/08  
C01F 7/56  
C30B 29/40  
H01L 21/203  
H01L 21/205

---

(21)Application number : 62-260833

(71)Applicant : NEC CORP

(22)Date of filing : 16.10.1987

(72)Inventor : SASAOKA CHIAKI

---

## (54) PRODUCTION OF SINGLE CRYSTAL OF GROUP III-V COMPOUND SEMICONDUCTOR

### (57)Abstract:

PURPOSE: To ensure growth with a throughput higher than an atomic layer epitaxy (ALE) with chloride under ordinary pressure and to obtain a high purity grown film by carrying out ALE in high vacuum with molecular beams of the monochloride of a group III metal and molecular beams of a molecule contg. a group V atom.

CONSTITUTION: Molecular beams of the monochloride of a group III metal and molecular beams of a molecule contg. a group V atom are alternately projected on a single crystal substrate set in high vacuum to grow a single crystal of a III-V compd. semiconductor on the substrate. The monochloride of a group III metal is formed by the reaction of the group III metal with chlorine or hydrogen chloride.

---

## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]